Patient Safety
July, 2003

1: Am J Health Syst Pharm. 2003 Jun 15;60(12):1229-32.
Getting practical about patient safety.
Thompson CA.
Publications and Drug Information Systems Office, American Society of Health-System Pharmacists, 7272 Wisconsin Avenue, Bethesda, MD 20814, USA.
PMID: 12845918 [PubMed - in process]

2: Am J Health Syst Pharm. 2003 Jun 15;60(12):1219-28.
CPOE, bedside technology, and patient safety: a roundtable discussion.
[No authors listed]
PMID: 12845917 [PubMed - in process]

3: Am J Kidney Dis. 2003 Jul;42(1 Suppl):61-5.
Patient monitoring in the london daily/nocturnal hemodialysis study.
Heidenheim AP, Leitch R, Kortas C, Lindsay RM.
BACKGROUND: Patient monitoring involves real-time surveillance of patients while they dialyze at home by a staff member ("monitor") at a centralized location. Monitoring is designed to ensure patient safety, patient compliance with treatment, and automatic collection of treatment data. METHODS: In the London Daily/Nocturnal Hemodialysis Study, 14 nocturnal hemodialysis (HD) patients were monitored from 13 to 602 sessions for a total of 4,096 patient-nights. Alarm data were collected and analyzed. RESULTS: The number of alarms per night ranged from 0 to 54, with an average of 1.31 +/- 2.81, resulting in a total of 5,351 registered alarms. Three hundred twenty-two calls because of nonresponse or slow response to alarms were made to patients' homes, but no calls to designated contact persons or emergency medical services were required. Arterial and venous pressure alarms were the most common type of alarm and were caused primarily by the patient obstructing blood tubing. The average number of alarms per night decreased significantly over time as patients gained experience with nocturnal HD, from a maximum of 1.98 +/- 3.31 alarms/night during the first month at home to a low of 0.74 +/- 1.63 alarms/night by the final month of follow-up. Each progressive decrease from month 3 through month 18 was statistically significantly lower than the value at month 1. CONCLUSION: Monitoring is essential for the initial 3 months of nocturnal HD therapy until the HD team is convinced the patient is stable and compliant. Thereafter, monitoring is necessary only if medically indicated.
PMID: 12830446 [PubMed - in process]

4: Am J Nurs. 2003 Jun;103(6):42-5; quiz 55.
Topical local anesthetics.

Wong D.
Publication Types:
Review
Review, Tutorial
PMID: 12802153 [PubMed - indexed for MEDLINE]

5: Am J Ophthalmol. 2003 Jun;135(6):821-9.
The Ahmed drainage implant in the treatment of pediatric glaucoma.
Morad Y, Donaldson CE, Kim YM, Abdolell M, Levin AV.
Department of Ophthalmology, The Hospital for Sick Children, University of Toronto, Toronto, Ontario, Canada.
PURPOSE: To report the safety and efficacy of Ahmed Glaucoma Valve (New World Medical, Inc., Rancho Cucamonga, California, USA) implantation for the management of pediatric glaucoma in the early and intermediate follow-up period. DESIGN: Consecutive interventional case series. METHOD: A retrospective chart review was conducted on 60 eyes (44 patients, age range at surgery 1.5 months to 16 years, average 6 +/- 4.9 years), with pediatric glaucoma that underwent Ahmed Glaucoma Valve implantation for medically uncontrolled intraocular pressure (IOP) between the years 1995 and 2000. Outcome measures were control of IOP below 21 mm Hg, the need for antiglaucoma medications after surgery, and loss of 2 or more lines of Snellen acuity. Complications were monitored. RESULTS: The postoperative follow-up period for each eye averaged 24.3 +/- 16 months (range, 3 to 60 months). At last follow-up, IOP was controlled in 44 eyes (73%), 11 of which did not need antiglaucoma therapy. Kaplan-Meier life-table analysis showed probability of success with or without medications of 93% (95% confidence interval [CI], 86%-100%), 86% (95% CI, 77%-96%), 71% (95% CI, 59%-87%), and 45%
(95% CI, 28%-80%) after 12, 24, 36, and 48 months of follow-up. Average IOP decreased from 32.8 +/- 6.2 before surgery to 16.6 +/- 8.0 postoperatively (P <.0001). The average number of medications used decreased from 4.4 +/- 1.97 to 2.0 +/- 2.0 (P <.0001). Kaplan-Meier survival analysis did not reveal any difference in survival profiles related to specific diagnosis of glaucoma, age (above or below 18 months), or prior surgery. Complications occurred in 30 eyes (50%). Although most resolved or were treated successfully, four patients had severe visual loss during the follow-up. Uveitis was a significant risk factor for tube exposure (Fisher exact test, P =.006). CONCLUSIONS: Ahmed Glaucoma Valve implantation is an effective treatment for pediatric glaucoma, although patients frequently require antiglaucoma medications. However, a high rate of potentially sight-threatening postoperative complications warrants ongoing close follow-up.
PMID: 12788122 [PubMed - indexed for MEDLINE]

6: Ann Emerg Med. 2003 Jul;42(1):81-7.
Patient safety in emergency airway management and rapid sequence intubation: metaphorical lessons from skydiving.
Levitan RM.
Department of Emergency Medicine, University of Pennsylvania School of Medicine, 3400 Spruce Street, Philadelphia, PA 19104, USA. levitanr@mail.med.upenn.edu
Concern about patient safety and failed rapid sequence intubation has led to an increased awareness of potentially difficult laryngoscopy situations and algorithms promoting techniques in awake patients. Given the low overall incidence of failed laryngoscopy, however, prediction of difficult laryngoscopy has poor positive predictive value and uncertain clinical utility, especially in emergency settings. Non-rapid sequence intubation approaches have comparatively lower chances of intubation success, require more time, and are associated with

more complications. As a specialty, emergency medicine has adopted rapid sequence intubation as the mainstay of emergency airway treatment for many appropriate reasons; the problem that must be addressed is how patient safety can be ensured while what is an inherently dangerous procedure is performed. A novel way to conceptualize patient risk and safety issues in rapid sequence intubation is to examine how inherent risk is managed in skydiving. Metaphorical lessons from skydiving that are applicable to rapid sequence intubation include (1) a redundancy of safety; (2) a methodic approach to primary chute deployment; (3) use of backup chutes that are fast, simple, and easy to deploy; (4) attention to monitoring; and (5) equipment vigilance. This article reviews how each of these lessons apply metaphorically to rapid sequence intubation, wherein the primary chute is laryngoscopy, the backup chute is rescue ventilation, and monitoring involves pulse oximetry.
PMID: 12827126 [PubMed - in process]

7: Ann Intern Med. 2003 Jun 17;138(12):996.
Comment on:
Ann Intern Med. 2003 Jun 17;138(12):974-9.
Improving patient care.
Sox HC.
Publication Types:
Comment
Editorial
PMID: 12809457 [PubMed - indexed for MEDLINE]

8: Ann Intern Med. 2003 Jun 17;138(12):997-8.
Comment on:
Ann Intern Med. 2003 Jun 17;138(12):974-9.
Patient safety and the reliability of health care systems.
Barach P, Berwick DM.
Publication Types:
Comment
Editorial
PMID: 12809458 [PubMed - indexed for MEDLINE]

9: AORN J. 2003 Jun;77(6):1241-5.
The national patient safety goals and their implications for perioperative nurses.
Beyea SC.
Dartmouth-Hitchcock Medical Center, Lebanon, NH, USA.
PMID: 12817745 [PubMed - in process]

10: Arch Phys Med Rehabil. 2003 Jun;84(6):877-82.
The accuracy of needle placement in lower-limb muscles: a blinded study.
Haig AJ, Goodmurphy CW, Harris AR, Ruiz AP, Etemad J.
Department of Physical Medicine and Rehabilitation, University of Michigan, Ann Arbor 48108, USA. Andyhaig@umich.edu
OBJECTIVE: To assess the accuracy of common anatomic guides for electromyographic needle placement in muscles. DESIGN: Blinded study. The dissector identified different needle placements by a random number attached to a wire in the insertion site. SETTING: A university anatomy laboratory. CADAVERS: Ten cadaver lower limbs. INTERVENTIONS: By using techniques published
in texts by Gieringer and Delagi and Perotto, clinical electromyographers palpated and measured appropriate locations for needle placement. A thin wire

was inserted through the needle into 36 different muscles in 10 cadavers, resulting in 263 targeted muscles. An anatomist blinded to intended location dissected and recorded muscles and other tissues that the wire pierced or passed near. MAIN OUTCOME MEASURES: Targeted muscle penetration, final resting place of
the wire tip, and proximity to vital structures. RESULTS: Fifty-seven percent of insertions penetrated the intended muscle. The wire tip was in the intended muscle 45% of the time. Seventeen percent of insertions penetrated or passed within 5mm of an important structure, including nerve (9.1%), tendon (3.0%), named artery (2.7%), vein (2.7%), or joint (0.8%). Specific muscle accuracy was highly variable, from 0% for 12 tries in various deep hip muscles to 100% of 10 tries in the vastus medialis. CONCLUSION: The accuracy of blind needle placement varied according to muscle. With the blind insertion technique, more accurate and safe needle placement strategies can be developed.
Publication Types:
Clinical Trial
Randomized Controlled Trial
PMID: 12808542 [PubMed - indexed for MEDLINE]

11: Br J Surg. 2003 Jun;90(6):668-79.
Systematic review of the safety and effectiveness of methods used to establish pneumoperitoneum in laparoscopic surgery.
Merlin TL, Hiller JE, Maddern GJ, Jamieson GG, Brown AR, Kolbe A.
Department of Public Health, University of Adelaide, Adelaide, South Australia, Australia.
BACKGROUND: A systematic review was conducted to determine which of the methods
of obtaining peritoneal access and establishing pneumoperitoneum is the safest and most effective. METHODS: Studies that met the inclusion criteria were identified from six bibliographic databases up to May 2002, the internet, hand-searches and reference lists. They were critically appraised using a validated checklist and data were extracted using standardized protocols. RESULTS: Meta-analysis of prospective, non-randomized studies of open versus closed (needle/trocar) access indicated a trend during open access towards a reduced risk of major complications (pooled relative risk (RR(p)) 0.30, 95 per cent confidence interval (c.i.) 0.09 to 1.03). Open access was also associated with a trend towards a reduced risk of access-site herniation (RR(p) 0.21, 95 per cent c.i. 0.04 to 1.03) and, in non-obese patients, a 57 per cent reduced risk of minor complications (RR(p) 0.43, 95 per cent c.i. 0.20 to 0.92) and a trend for fewer conversions to laparotomy (RR(p) 0.21, 95 per cent c.i. 0.04 to 1.17). Data on major complications in studies of direct trocar versus needle/trocar access were inconclusive. Minor complications in randomized controlled trials were fewer with direct trocar access (RR(p) 0.19, 95 per cent c.i. 0.09 to 0.40), predominantly owing to a reduction in extraperitoneal insufflation. CONCLUSION: The evidence on the comparative safety and effectiveness of the different access methods was not definitive, but there were trends in the data that merit further exploration.
Publication Types:
Meta-Analysis
Review
Review, Academic
PMID: 12808613 [PubMed - indexed for MEDLINE]

12: Clin Infect Dis. 2003 Jun 1;36(11):1438-44. Epub 2003 May 20.

Routine cycling of antimicrobial agents as an infection-control measure.
Fridkin SK.
Division of Healthcare Quality Promotion, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, GA, 30333, USA. skf0@cdc.gov
Antimicrobial cycling is the deliberate, scheduled removal and substitution of specific antimicrobials or classes of antimicrobials within an institutional environment (either hospital-wide or confined to specific units) to avoid or reverse the development of antimicrobial resistance. True antimicrobial cycling requires a return to the antimicrobial(s) that were first used. Testing of the hypothesis that cycling will result in a lower prevalence of resistance is ongoing, mostly occurs within intensive care units, and largely involves cycling regimens targeted for treatment of suspected gram-negative bacterial infections. Unfortunately, there has been insufficient study to determine whether any meaningful impact on resistance has occurred as a result of a cycling program. Mathematical models question the usefulness of cycling as an infection-control method. Published studies demonstrate that cycling may be one way to change prescribing practices by clinicians without sacrificing patient safety. However, optimizing antimicrobial use through traditional and novel methods (e.g., computer decision support) should not be abandoned.
PMID: 12766840 [PubMed - indexed for MEDLINE]

13: Front Health Serv Manage. 2003 Summer;19(4):17-28.
Comment in:
Front Health Serv Manage. 2003 Summer;19(4):31-4; discussion 45-6.
Front Health Serv Manage. 2003 Summer;19(4):35-9; discussion 45-6.
Front Health Serv Manage. 2003 Summer;19(4):41-4; discussion 45-6.
Changing the healthcare culture: the consumer as part of the system of care.
Morath J.
Children's Hospitals and Clinics, Minneapolis, Minnesota, USA.
As more information on the poor quality of healthcare becomes available, consumers, purchasers, and health plans are asking questions that will change healthcare delivery and the practices of purchasers. Past practices that include fragmented approaches; fleeting incentives; short-term, transaction-based payment structures; and failure to engage the customer are coming to an end. They are being replaced by collaborative and systemic views. Consumers, through their purchasers of healthcare, are demanding new methods, new metrics, and a higher standard of accountability for all parties. Purchasers themselves are turning up the heat on providers to act with the consumer perspective in mind and are advocating continuous, consumer-driven healthcare delivery.
PMID: 12825715 [PubMed - indexed for MEDLINE]

14: Healthc Exec. 2003 Jul-Aug;18(4):16-20.
Promoting patient safety through facility design.
Wolf EJ.
PMID: 12841056 [PubMed - in process]

15: Healthcare Benchmarks Qual Improv. 2003 Jul;10(7):suppl 2-4.
Patient Safety Alert. PA state legislature puts patient safety in spotlight.
[No authors listed]
PMID: 12854252 [PubMed - in process]

16: Healthcare Benchmarks Qual Improv. 2003 Jul;10(7):suppl 1-2.
Patient Safety Alert. Organizations unveil patient safety road map.
[No authors listed]

PMID: 12854251 [PubMed - in process]

17: Hosp Case Manag. 2003 Jul;11(7):suppl 1-2.
Patient Safety Alert. Organizations unveil patient safety road map.
[No authors listed]
PMID: 12827954 [PubMed - in process]

18: Hosp Case Manag. 2003 Jul;11(7):2-4.
Patient Safety Alert. PA state legislature puts patient safety in spotlight.
[No authors listed]
PMID: 12827955 [PubMed - in process]

19: J Am Coll Surg. 2003 Jun;196(6):938-48.
Who oversees innovative practice? Is there a structure that meets the monitoring needs of new techniques?
Strasberg SM, Ludbrook PA.
Section of Hepato-Pancreato-Biliary Surgery, Department of Surgery, St Louis, MO 63110, USA.
Publication Types:
Review
Review, Tutorial
PMID: 12788432 [PubMed - indexed for MEDLINE]

20: J Crit Care. 2003 Jun;18(2):87-94.
Improving the utilization of medical crisis teams (Condition C) at an urban tertiary care hospital.
Foraida MI, Devita MA, Braithwaite RS, Stuart SA, Brooks MM, Simmons RL.
University of Pittsburgh Presbyterian Hospital, Pittsburgh, PA.
PURPOSE: Serious clinical deterioration precedes most cardiopulmonary arrests, and there is evidence that organized responses to this deterioration may prevent a substantial proportion of in-hospital deaths. We aimed to increase the utilization of our medical crisis response team (Condition C) to impact this source of mortality. METHODS: We have examined the change in numbers of Condition Cs and the main alternative response strategy (sequential stat pages) after the implementation of 4 strategies to increase Condition C utilization: (1) immediate reviews of all sequential STAT pages, (2) feedback to caregivers responsible for delays in Condition C activation, (3) creation of objective criteria for invoking a crisis response, and (4) dissemination of objective criteria through posting in units, e-mail, and in-service oral presentations. RESULTS: Over a 3-year period, interventions were followed by increased use of organized responses to medical crises (Condition Cs) and decreased numbers of disorganized responses (sequential STAT pages). The interventions that involved objective definition and dissemination of criteria for initiating the Condition C response were followed by 19.2 more Condition Cs monthly (95% confidence interval [CI], 12.1-26.3; P <.0001) and 5.7 fewer sequential STAT pages monthly (95% CI, 3.2-8.2). The interventions that involved giving feedback to medical personnel based on review of their care were not associated with changes in the measures. CONCLUSION: Utilization of an important patient safety measure may be increased by focused interventions at an urban tertiary care hospital.
PMID: 12800118 [PubMed - in process]

21: Med Econ. 2003 Jun 6;80(11):16.
A boost for patient safety practices.
Weiss GG.

PMID: 12828114 [PubMed - in process]

22: N Engl J Med. 2003 Jun 19;348(25):2570-2.
Errors today and errors tomorrow.
Berwick DM.
Publication Types:
Editorial
PMID: 12815144 [PubMed - indexed for MEDLINE]

23: N Engl J Med. 2003 Jun 19;348(25):2526-34.
Improving safety with information technology.
Bates DW, Gawande AA.
Division of General Medicine and Primary Care, Department of Medicine, Brigham and Women's Hospital, Boston, MA 02115, USA. dbates@partners.org
PMID: 12815139 [PubMed - indexed for MEDLINE]

24: Nurs Manage. 2003 Jun;34(6):44-8.
Balancing staffing and safety.
Clarke SP.
Center for Health Outcomes and Policy Research, University of Pennsylvania School of Nursing, Philadelphia, USA.
Several high-profile research studies link nurse staffing and patient safety.
PMID: 12789053 [PubMed - in process]

25: Pharm World Sci. 2003 Jun;25(3):118-25.
Identification and verification of critical performance dimensions. Phase 1 of the systematic process redesign of drug distribution.
Colen HB, Neef C, Schuring RW.
Department of Clinical Pharmacy, Hospital Medisch Spectrum Twente, Enschede, The Netherlands.
BACKGROUND: Worldwide patient safety has become a major social policy problem for healthcare organisations. As in other organisations, the patients in our hospital also suffer from an inadequate distribution process, as becomes clear from incident reports involving medication errors. Medisch Spectrum Twente is a top primary-care, clinical, teaching hospital. The hospital pharmacy takes care of 1070 internal beds and 1120 beds in an affiliated psychiatric hospital and nursing homes. OBJECTIVE: In the beginning of 1999, our pharmacy group started a large interdisciplinary research project to develop a safe, effective and efficient drug distribution system by using systematic process redesign. The process redesign includes both organisational and technological components. This article describes the identification and verification of critical performance dimensions for the design of drug distribution processes in hospitals (phase 1 of the systematic process redesign of drug distribution). METHODS: Based on reported errors and related causes, we suggested six generic performance domains. To assess the role of the performance dimensions, we used three approaches: flowcharts, interviews with stakeholders and review of the existing performance using time studies and medication error studies. CONCLUSIONS: We were able to set targets for costs, quality of information, responsiveness, employee satisfaction, and degree of innovation. We still have to establish what drug distribution system, in respect of quality and cost-effectiveness, represents the best and most cost-effective way of preventing medication errors. We intend to develop an evaluation model, using the critical performance dimensions as a starting point. This model can be used as a simulation template to compare different drug distribution concepts in order to define the differences in quality and cost-effectiveness.

PMID: 12840965 [PubMed - in process]

26: Semin Laparosc Surg. 2003 Jun;10(2):79-83.
Setting a research agenda on patient safety in surgical settings.
Beyea SC, Kilbridge P.
Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire (Formerly with AORN).
Suzanne.C.Beyea@hitchcock.org
A culture of safety is an achievable objective for perioperative management. Research in analysis, safety factors, alarms, instruction, and management can make this change rapidly. It is important to build the data and evidence for those practices that show improved patient outcomes. Those practices and the processes that develop them should be sanctioned by responsible organizations in active collaboration.
PMID: 12835830 [PubMed - in process]

27: Sentinel Event Alert. 2003 Jun 24;(29):1-2.
Preventing surgical fires.
[No authors listed]
PMID: 12833915 [PubMed - indexed for MEDLINE]

28: Soc Sci Med. 2003 Jul;57(1):147-53.
Layperson and physician perceptions of the malpractice system: implications for patient safety.
Liang BA.
Health Law and Policy Institute, University of Houston Law Center, 100 Law Center, 77204-6060, Houston, TX, USA
The malpractice tort system functions upon the assumption that the medical profession defines its own standard of care. Hence, clinical assessments should theoretically mirror legal ones. However, if there is a conflict between the two, this conflict may reflect a perceived bias of the system either for or against a party. This exploratory study attempts to determine whether such a bias could exist. Physicians and layperson jury pool members were asked to review 10 jury verdict case scenarios. Respondents were asked first to assess whether the defendant physician provided clinically appropriate care; they were then asked to predict what the jury in the case actually decided. Laypersons showed significantly better agreement with actual jury verdicts on clinical assessment and success in jury verdict prediction than physicians. Both physicians and laypersons switched the favored party from clinical assessment to verdict prediction, with a vast majority of these changes being made from defendant to plaintiff. These results were consistent overall and when parsing assessments by case verdicts. Thus, laypersons and physicians may perceive a similar bias toward plaintiffs in the malpractice system. If these results can be generalized, the malpractice system may be inducing behavior that has a negative impact on patient safety.
PMID: 12753823 [PubMed - in process]

29: World J Surg. 2003 Jun 10 [Epub ahead of print].
Patient Safety in Surgery: Error Detection and Prevention.
Etchells E, O'Neill C, Bernstein M.
Patient Safety Service and Department of Medicine, Sunnybrook and Womens' College Health Sciences Center, 2075 Bayview Avenue, Room C410, Toronto, Ontario M4N 3M5, Canada.
Error in medicine is becoming a well recognized phenomenon. The U.S. Institute of Medicine's publication in 1999 included estimations that medical error is the

eighth leading cause of death in the United States and results in up to 100,000 deaths annually. Retrospective studies and a few prospective studies are shedding more light on this challenging problem. Strategies to reduce error and increase patient safety have not been widely developed or embraced by surgeons for a variety of reasons. We provide a review on patient safety aimed at surgeons that includes definitions, incidence of errors including those in the surgical literature, causes of error, methods of error detection, and strategies to minimize errors and maximize patient safety.
PMID: 12799752 [PubMed - as supplied by publisher]

30: World J Surg. 2003 Jun 10 [Epub ahead of print].
Challenges of Teaching Surgery: Ethical Framework.
Raja AJ, Levin AV.
Department of Surgery, Aga Khan University Hospital, Karachi, Stadium Road, PO Box 3500, Karachi 74800, Pakistan.
Surgeons, trainees, and patients may be uncomfortable with the secrecy that surrounds the process of teaching and learning surgical procedures. Well structured training programs use a system of graded responsibility, supervision, and evaluation to ensure skill development and patient safety. Patient outcomes are generally excellent in training institutions. Disclosure of the role of trainees and their contribution to care enhances trust.
PMID: 12799751 [PubMed - as supplied by publisher]